

Remarks

The Office action mailed September 10, 2003, has been reviewed and carefully considered. The allowance of claims 14-22, 24-30, 35-63 and 69-79 is acknowledged. The allowability of the subject matter of claims 5, 8-11, 34, 65-67 and 80-89 is also acknowledged. Claims 1, 7, 13, 31, 64, 65, and 68 have been amended for purposes of further clarification. Support for the amendment to claims 1, 7, 13 and 31 is found in the specification, for example, at page 7, lines 27-29. Support for the amendment to claims 64 and 68 is found throughout the specification. Claims 5, 8-11, 23, and 34 have been canceled. New claims 90-95 have been added. Claim 90 is allowable claim 5 re-written in independent form. Claim 91 is allowable claim 8 re-written in independent form. Claims 92-94 track canceled claims 9-11. Claim 95 is allowable claim 34 re-written in independent form. The specification and figures have been amended to correct several informalities that were pointed out by the examiner.

Claims 1-4, 6, 7, 12, 13, and 31-33 have been rejected under 35 U.S.C. §102(b) over Skowronski. Similarly, claims 1-4, 6, 7, 12, 13, and 31-33 have been rejected under 35 U.S.C. §102(e) over George et al. Neither Skowronski nor George et al. disclose or suggest a hydrogen gas separation system or adsorptive-enriched oxygen gas delivery system which must be present in the system or process recited in claims 1-4, 6, 7, 12, 13, and 31-33. Since these patents do not disclose all of the features of these claims, the pending rejections over Skowronski and George et al. must be withdrawn.

Claims 1-4, 6, 7, 13 and 31-33 have been rejected under 35 U.S.C. §102(e) over Rehg et al. The Rehg et al. patent has a §102(e) effective date of November 13, 2000, which is the filing date of the application that matured into the Rehg et al. patent. The present application claims priority to Canadian patent application 2,325,072, which was filed on October 30, 2002. Thus, the priority date of the present application is prior to the §102(e) effective date of Rehg et al. A certified copy of Canadian patent application 2,325,072 was mailed to the USPTO on April 19, 2002.

A review of the disclosure in Canadian patent application 2,325,072 reveals that claims 1-4, 6, 7, 13 and 31-33 are fully supported and thus are entitled to the October 30, 2000 priority date. The Canadian patent application states at page 4, lines 6-9, that "[t]he present invention provides an advanced MCFC system incorporating a high temperature pressure swing adsorption (PSA) and integrated turbine system to enrich hydrogen over the anode while rapidly separating carbon dioxide to the cathode. In a particular example, FIG. 6 shows a system wherein a heavy product stream produced by PSA unit 204 is introduced into a compressor 244 (which is part of the hydrogen gas separation system) and then into a gas turbine combustor 206 (page 17, lines 6-10). The combustor 206 burns the residual fuel values in the heavy product stream (page 18, lines 9-12). Thus, at least a portion of the energy in the heavy product stream, which is part of the hydrogen separation system, is recovered in the combustor 206 as recited in

claims 1-4, 6, 7, 13 and 31-33. The hot gas produced by the combustor 206 is introduced into a heat exchanger 285 (page 18, lines 13-15). Cathode exhaust from a MCFC 202 also is introduced into the heat exchanger 285 such that the cathode exhaust gas is reheated by the hot gas from the combustor 206 (page 18, lines 17-20). The re-heated cathode exhaust gas then is introduced into a turbine 262 (page 18, lines 17-20). The expanding cathode exhaust gas drives turbine 262 which in turn drives (via shaft 267) heavy product compressor 244 and light reflux expander 140, both of which are components of the hydrogen gas separation system. Thus, the cathode exhaust gas that carries the recovered energy from the PSA heavy product stream drives (via turbine 262 and shaft 267) components of the hydrogen gas separation system as recited in claims 1-4, 6, 7, 13 and 31-33.

Since claims 1-4, 6, 7, 13 and 31-33 are entitled to a priority date of October 30, 2000 that is before the §102(e) effective date of Rehg et al., the pending rejection over Rehg et al. must be withdrawn.

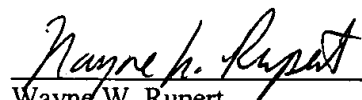
Claims 64 and 68 have been rejected under 35 U.S.C. §102(b) over Tanabe et al. Tanabe et al. does not disclose introducing a heat recovery working fluid into a compressor or pump as presently recited in claims 64 and 68. Accordingly, the 35 U.S.C. §102(b) rejection of claims 64 and 68 over Tanabe et al. must be withdrawn.

It is respectfully submitted that the present claims are in condition for allowance. Should there be any questions regarding this application, Examiner Kalafut is invited to contact the undersigned attorney at the telephone number shown below.

Respectfully submitted,

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